

138570

# Greenwood Chemical Co.

STATE HIGHWAY 600  
GREENWOOD, VIRGINIA 22943  
TEL (703) 456-3831 - P.O. BOX 26

March 14 1976

REC'D APR 14 1976

VALLEY REGIONAL  
OFFICE

Mr. James A. Preston  
State Water Control Board  
211 North Hamilton Street  
Richmond, Virginia 23230

Dear Sir,

Enclosed please find application for discharge of clean cooling water. Also enclosed is data concerning application for No Discharge Permit.

Items enclosed:

- (1.) Map of land layout and building details.
- (2.) Layout of floor space and reactor locations.
- (3.) List of materials used in principle process.
- (4.) List of discontinued products.
- (5.) Application for discharge permit for cooling - See Note 11c water.
- (6.) Form GW-6 1st. quarter pumpage. - To Bill Stewett

The two chemicals that are predominant are Sulfuric Acid and Sodium Hydroxide. These are discharged into our waste pits.

We also have a discharge of approximately 8311# of Sodium Cyanide in a water solution that is discharged into our pit behind C building and is treated with Phosphorous Acid in a water solution containing Sodium Sulfide.

We have six settling ponds. These ponds contain 55 gallon drums so that any reactive chemicals will form an Iron complex. When our waste water reaches the sixth pond we have found it to be suitable for wild life.

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-2-

We also own six acres of land between our pond and the creek. Here we keep horses. The pond in our pasture contains fish, frogs and wild geese.

I realize this is only the beginning of information you might need. Let me know what other information that is required. We will be awaiting your reply.

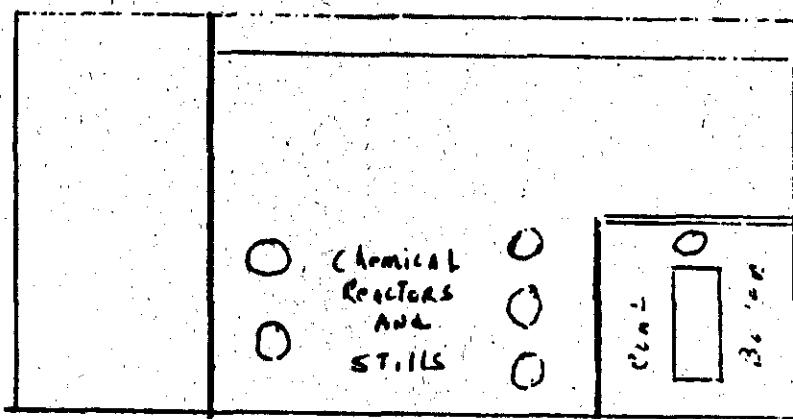
Cordially,



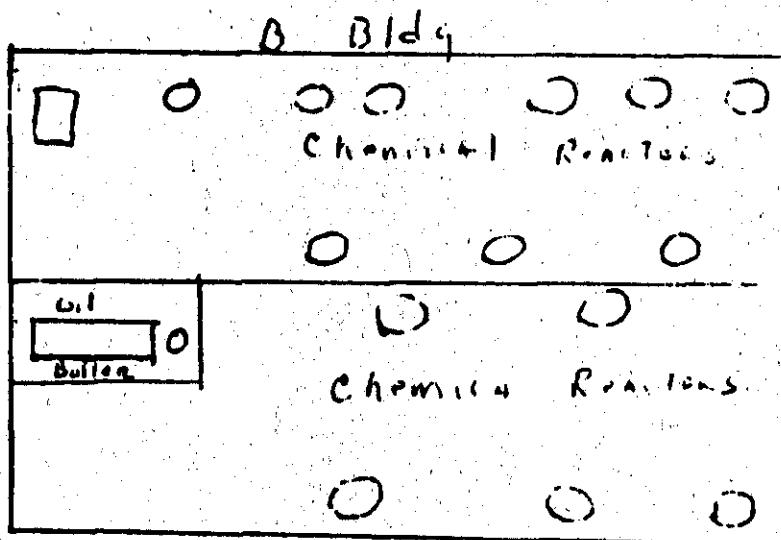
Clinton C. Shipman

CCS/hjk

AR000036



A Bldg.



B Bldg.

AR000037

## Naphthaleneacetic Acid Process

Follow Sheet

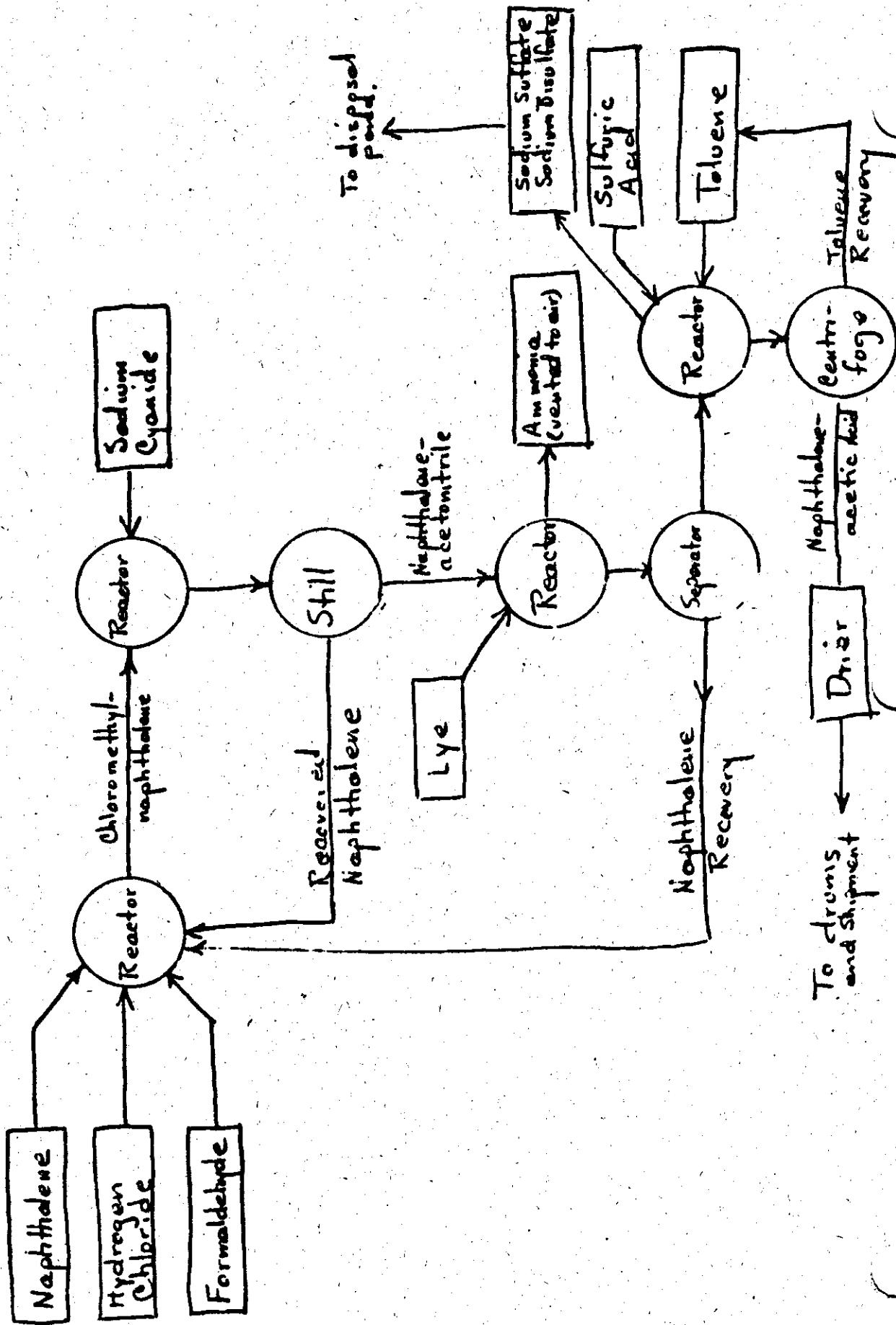


Exhibit T EE(u)

AR000038

# Greenwood Chemical Co.

STATE HIGHWAY 690

GREENWOOD, VIRGINIA 22943

TEL (703) 456-3831 - P. O. BOX 26

## 3-Phenyl-5-Chloro-Anthranil

320# Taranitro Chloro Benzene  
240# Phenyl Cyanide  
100# Sodium Hydroxide  
400# Toluene  
400# Toluene  
65 gal Ethanol  
Yields

467# 3-Phenyl-5-Chloro-Anthranil  
99# Sodium Cyanide  
73# 20  
100# Wash 20

## Operating 3-5 day maximum Input Outgoings

11,800# 3-5  
87,600# Phenyl Cyanide  
2,9,000# Sodium Hydroxide  
292,000# Toluene (Recovered 85%)  
60,225 gal. Ethanol (Recovered 85%)

70,455# 3-Phenyl-5-Chloro-Anthranil  
36,135# Sodium Cyanide  
420,945# 20

INPUT - 1975  
26,664#  
20,148#  
50,370#  
248,200#  
13,852#

OUTGOING - 1975  
39,205#  
6,311#  
96,794#

Operated 34 days in 1975.

AR000039

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## 2-Amino-5-Chlorobenzophenone

02"	utanol
432"	Toluene
300"	3-Phenyl-5-Chloro-Anthranil
2"	lue Stone
50"	Sulfuric Acid
150"	Sodium Hypophosphite
290"	Water
	ield

300"	2-Amino-5-Chlorobenzophenone
07"	Phosphorous Acid
290"	Water

## Running 305 Day Maximum Input Outgoing

	INPUT
37,230"	utanol (Recovered 85%)
157,680"	Toluene (Recovered 85%)
109,500"	3-Phenyl-5-Chloro-Anthranil
730"	lue Stone
54,750"	Sulfuric Acid
54,750"	Sodium Hypophosphite
105,850"	20

	OUTGOING
109,500"	2-Amino-5-Chlorobenzophenone
39,055"	Phosphorous Acid
105,850"	H <sub>2</sub> O
82,490"	Sodium Sulfide

	INPUT - 1975
	31,645"
	134,020"
	25,185"
	68"
	12,593"
	12,593"
	24,346"

	OUTGOING - 1975
	25,185"
	8,893"
	24,346"
	16,973"

Operated 24 days in 1975 or 23%.

AR000040

# Greenwood Chemical Co.

STATE HIGHWAY 680

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TEL (703) 456-3891 - P. O. BOX 26

## BENZOIN

1,220# Benzaldehyde  
1,208# Ethanol  
120# Sodium Cyanide  
1,208# Water  

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Yields

1,220# Benzoin  
1,208# Ethanol  
120# Sodium Cyanide  
1,208# Water

Running 365 days maximum Input and Outgoing

### INPUT

445,000# Benzaldehyde  
66,795# Ethanol (Recovered)  
43,800# Sodium Cyanide  
440,920# Water

### OUTPUT

445,000# Benzoin  
66,795# Ethanol (Recovered)  
43,800# Sodium Cyanide  
440,920# Water

INPUT 1975

9,760#  
9,662#  
960#  
9,654#

OUTPUT 1975

9,760#  
9,662#  
960#  
9,664#

Operated 10 days.

AR000041

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## BETA NAPHTHOXY ACETIC ACID

110# Beta Naphthol  
62# Sodium Hydroxide  
78# Mono Chloro Acetic Acid  
350# Water  
92# HCl Acid  
400# Naphtha  
Yields

84# Beta Napthoxy Acetic Acid  
350# Water  
58# Sodium Chloride  
400# Naphtha (Recovered)

Running 365 days maximum Input and Out-going

### INPUT

40,150# Beta Naphthol  
22,630# Sodium Hydroxide  
28,470# Mono Chloro Acetic Acid  
127,750# Water  
36,500# HCl Acid  
73,000# Naphtha (Recovered)

### OUT-PUT

30,660# Beta Napthoxy Acetic Acid  
127,750# Water  
21,170# Sodium Chloride  
73,000# Naphtha (Recovered)

### Input 1975

880#  
496#  
624#  
2,800#  
800#

### OUT-PUT 1975

672#  
2,800#  
464#

Operated 8 days.

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## BENZIL:

Menkoin shipped to High Point, North Carolina and converted to Benzil.

## NAPHTHALENE ACETIC ACID:

Purchased from Montco Research in Florida.

## 2-BENZOYL PYRIDINE:

Do not make anymore.

## FICLATIC ACID:

Do not make anymore.

## GENETIC ACID:

Only made 34 lbs.

## DIETHYLAMINOETHYLAMINE:

Do not make anymore.

## NAPHTHOLIC ACID:

Made in Lab.

AR000043

APRIL



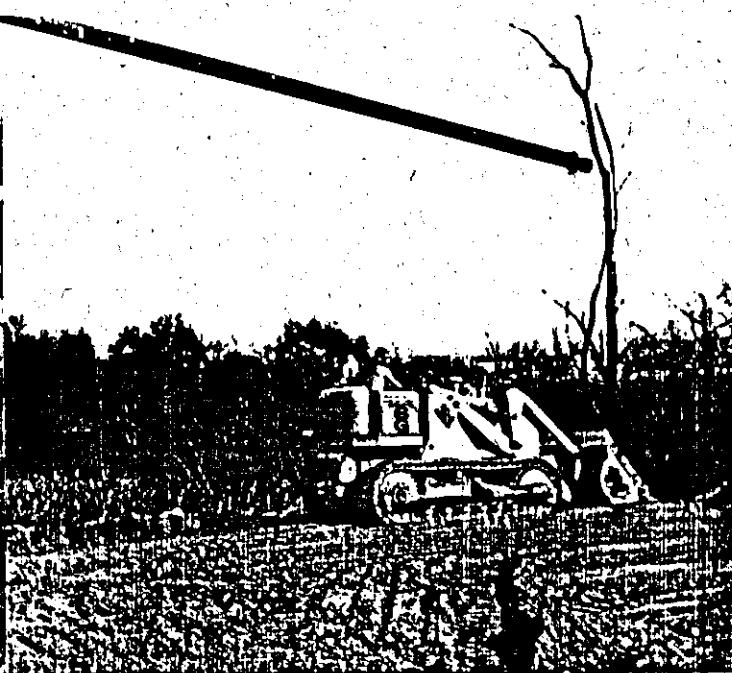
TO BE FILLED IN



TO BE USED AS HOLDING POND  
DURING LINING PROCESS.



DIGGING FOR CONCRETE  
STRUCTURES



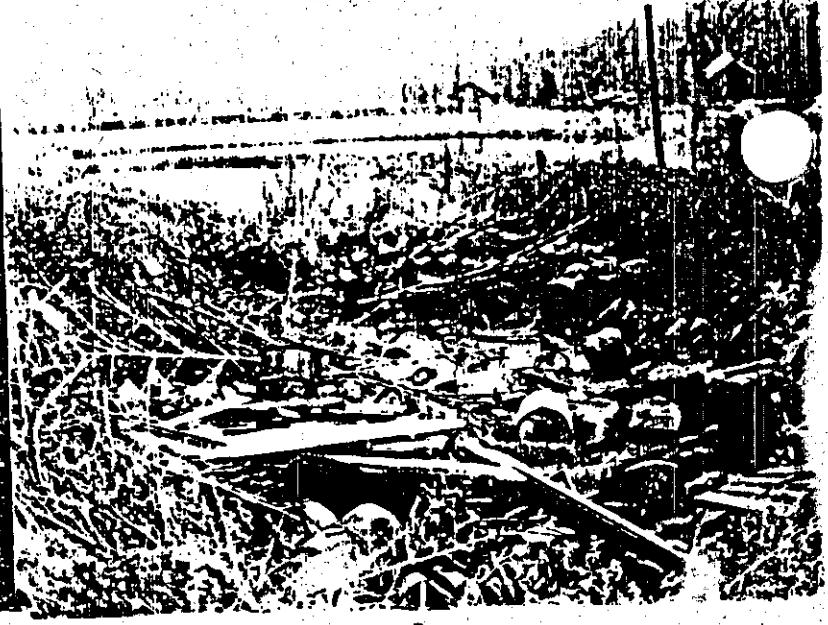
GRADING OLD POND.

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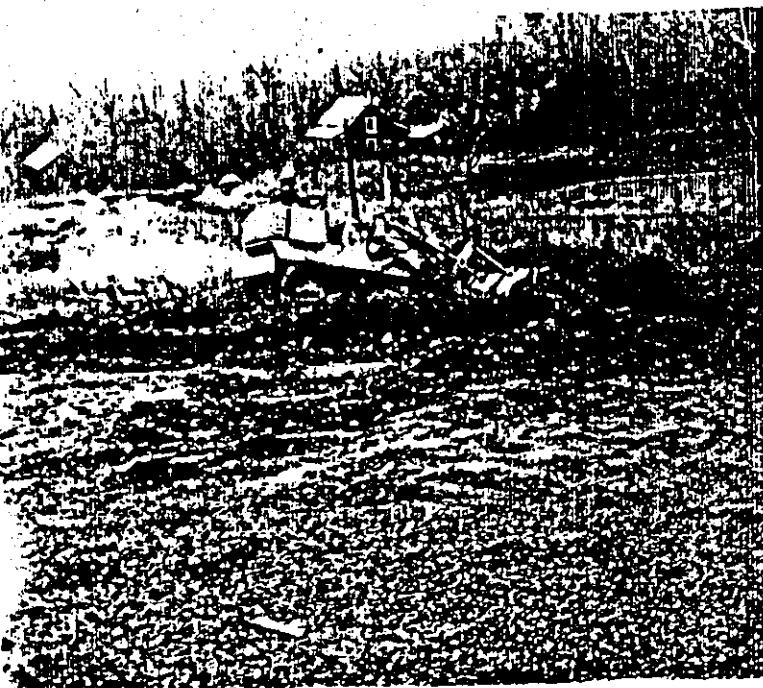
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X-LOCATION OF PIT NOW FILLED



"A" BUILDING PIT



"A" BUILDING PIT BEING FILLED IN.



AR000045